



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/597,924

08/11/2006

Takayuki Shibata

W1878.0237

7913

32172

7590

03/11/2009

DICKSTEIN SHAPIRO LLP

1177 AVENUE OF THE AMERICAS (6TH AVENUE)

NEW YORK, NY 10036-2714

EXAMINER

BAIG, ADNAN

ART UNIT

PAPER NUMBER

4172

MAIL DATE

DELIVERY MODE

03/11/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/597,924	Applicant(s) SHIBATA, TAKAYUKI	
	Examiner ADNAN BAIG	Art Unit 4172	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/6/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 4172

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Itoh (US 7,486,634).

Regarding Claim 1,

Art Unit: 4172

Itoh discloses a communications system for adaptively controlling a modulation mode and an encoding rate for data transmitted from a transmitter to a receiver, wherein: said receiver comprises channel quality measuring means for measuring a channel quality (Referring to Fig. 6, item 33 located in the receiver estimates the signal to noise ratio (SNR) or channel quality, Col. 8 lines 62-65). control channel error detecting means for detecting an error of a control channel, (Col. 2 lines 14-18).

said transmitter comprises adaptive modulation control means for controlling the modulation mode and encoding rate (Col. 1 lines 5-17), in accordance with the channel quality notified from said receiver, (Col. 1 lines (65-67)-Col. 2 lines (1-3)).

transmission power control means for controlling a transmission power ratio of the control channel to a data channel in accordance with a control channel error detection result notified from said receiver and the modulation mode and encoding rate. Col. 3 lines (66-67)-Col. 4 lines (1-8). Referring to Fig. 6, item 40 is responsible for error detection in the control channel and notifies all possible errors in a "retransmission request" to item 44 which in response transmits the error to the base station (Fig. 8, item 10) which is responsible for adjusting the power based on control channel error detection notified from the receiver (Fig. 6). Referring to Fig. 8, item 113 controls transmission power of a modulation and encoding rate (item 13) containing channel quality information (SNR) received from item 112, Col.16 lines (25-28). Referring to Fig.

Art Unit: 4172

8, transmission power is controlled in a ratio of the control channel (Col. 22 lines 35-48), to data channel based on item 112 (control unit), Col. 20 lines 13-31.

Regarding Claim 2, Itoh discloses the communications system according to claim 1, wherein said transmission power control means includes:

means for independently calculating a control channel error ratio for each combination of the modulation mode and encoding rate determined by said adaptive modulation control means, (Referring to Fig. 8, item 4 notifies mode determining unit (item 111) of a channel error Col. 2 lines (55-67)-Col. 3 lines(1-6), where arithmetic operation is performed for each set of modulation and code rate (MCS,item13), and transmission power (item 113) is controlled by the control unit (item112) (Col. 15 lines (45-67) – Col. 16 lines (1-3)).

means for variably Controlling the transmission power ratio of the control channel to the data channel in accordance with the control channel error ratio, (Referring to Fig. 8, transmission power ratio is controlled by control unit 112 where a calculation of maximum power is determined for a user and power amount is allocated or controlled efficiently ,Col. 21 lines 24-60).

Regarding Claim 3, Itoh discloses the communications system according to claim 1, wherein said transmission power control means controls the transmission power ratio of

Art Unit: 4172

the control channel to the data channel within a range in which the transmission power ratio is independently set for each combination of the modulation mode and encoding rate, (Transmission power is controlled for each set of a selected modulation system and code rate (MCS) Col. 16 lines 7-28, which is referred to as a transmission parameter(range). Col. 2 lines 35-46).

Regarding Claim 4, Itoh discloses the communications system according to claim 1, wherein said transmission power control means controls a transmission power ratio of a pilot channel to the data channel as well as the transmission power ratio of the control channel to the data channel, Col. 8 lines (62-67) - Col. 9 lines (1-7).

Regarding Claim 5, Itoh discloses a transmitter for adaptively controlling a modulation mode and an encoding rate for data transmitted to a receiver, comprising:

adaptive modulation control means for controlling a modulation mode and an encoding rate (Col. 1 lines 5-17), in accordance with a channel quality notified from said receiver, (Col. 1 lines (65-67)-Col. 2 lines (1-3)).

transmission power control means for controlling a transmission power ratio of a control channel to a data channel in accordance with a control channel error detection result notified from said receiver and the modulation mode and encoding rate, Col. 3 lines (66-67)-Col. 4 lines (1-8). Referring to Fig.6, item 40 is responsible for error detection in the control channel and notifies all possible errors

Art Unit: 4172

in a "retransmission request" to item 44 which in response transmits the error to the base station (Fig. 8, item 10) which is responsible for adjusting the power based on control channel error detection notified from the receiver (Fig. 6). Referring to Fig. 8, item 113 controls transmission power of a modulation and encoding rate (item 13) containing channel quality information (SNR) received from item 112, Col.16 lines (25-28). Referring to Fig. 8, transmission power is controlled in a ratio of the control channel (Col. 22 lines 35-48), to data channel based on item 112 (control unit), Col. 20 lines 13-31.

Regarding Claim 6, Itoh discloses the transmitter according to claim 5, wherein said transmission power control means includes:

means for independently calculating a control channel error ratio for each combination of the modulation mode and encoding rate determined by said adaptive modulation control means, (Referring to Fig. 8, item 4 notifies mode determining unit (item 111) of a channel error Col. 2 lines (55-67)-Col. 3 lines(1-6), where arithmetic operation is performed for each set of modulation and code rate (MCS,item13), and transmission power (item 113) is controlled by the control unit (item112) (Col. 15 lines (45-67) – Col. 16 lines (1-3)).

means for variably controlling the transmission power ratio of the control channel to the data channel in accordance with the control channel, (Referring to Fig. 8, transmission

Art Unit: 4172

power ratio is controlled by control unit 112 where a calculation of maximum power is determined for a user and power amount is allocated or controlled efficiently ,Col. 21 lines 24-60).

Regarding Claim 7, Itoh discloses the transmitter according to claim 5, wherein said transmission power control means controls the transmission power ratio of the control channel to the data channel within a range in which the transmission power ratio is independently set for each combination of the modulation mode and encoding rate, (Transmission power is controlled for each set of a selected modulation system and code rate (MCS) Col. 16 lines 7-28, which is referred to as a transmission parameter(range). Col. 2 lines 35-46).

Regarding Claim 8, Itoh discloses the transmitter according to claim 5, wherein said transmission power control means controls a transmission power ratio of a pilot channel to the data channel as well as the transmission power ratio of the control channel to the data channel, Col. 8 lines (62-67) - Col. 9 lines (1-7).

Regarding Claim 9, Itoh discloses a communication control method for adaptively controlling a modulation mode and an encoding rate for data transmitted from a transmitter to a receiver, comprising the steps of:

Art Unit: 4172

measuring a channel quality in said receiver, (Col. 8 lines 62-65, Referring to Fig.6, item 33 located in the receiver estimates the signal to noise ratio (SNR) or channel quality).

detecting a control channel error in said receiver, (Col. 2 lines 14-18).

notifying the channel quality and the control channel error from said receiver to said transmitter, Col.2 lines 30-35.

controlling, in said transmitter, a modulation mode and an encoding rate (Col. 1 lines 5-17), in accordance with the channel quality notified from said receiver, (Col. 1 lines (65-67)-Col. 2 lines (1-3)).

controlling, in said transmitter, a transmission, power ratio of a control channel to a data channel in accordance with a control channel error detection result notified from said receiver and the modulation mode and encoding rate, Col. 3 lines (66-67)-Col. 4 lines (1-8). Referring to Fig.6, item 40 is responsible for error detection in the control channel and notifies all possible errors in a "retransmission request" to item 44 which in response transmits the error to the base station (Fig. 8, item 10) which is responsible for adjusting the power based on control channel error detection notified from the receiver (Fig. 6). Referring to Fig. 8, item 113 controls transmission power of a modulation and encoding rate (item 13) containing channel quality information (SNR) received from item 112, Col.16 lines (25-28). Referring to Fig. 8, transmission power is controlled in a ratio of the control channel (Col. 22 lines 35-48), to data channel based on item 112 (control unit), Col. 20 lines 13-31.

Regarding Claim 10, Itoh discloses the communication control method according to claim 9, wherein said step of controlling a transmission power ratio includes the steps of: calculating a control channel error ratio independently for each combination of the modulation mode and encoding rate, (Referring to Fig. 8, item 4 notifies mode determining unit (item 111) of a channel error Col. 2 lines (55-67)-Col. 3 lines(1-6), where arithmetic operation is performed for each set of modulation and code rate (MCS,item13), and transmission power (item 113) is controlled by the control unit (item112) (Col. 15 lines (45-67) – Col. 16 lines (1-3)).

variably controlling the transmission power ratio of the control channel to the data channel in accordance with the control channel error ratio, (Referring to Fig. 8, transmission power ratio is controlled by control unit 112 where a calculation of maximum power is determined for a user and power amount is allocated or controlled efficiently ,Col. 21 lines 24-60).

Regarding Claim 11, Itoh discloses the communication control method according to claim 9, wherein said step of controlling a transmission power ratio includes the step of controlling the transmission power ratio of the control channel to the data channel within a range in which the transmission power ratio is independently set for each combination of the modulation mode and encoding rate, (Transmission power is controlled for each

Art Unit: 4172

set of a selected modulation system and code rate (MCS) Col. 16 lines 7-28, which is referred to as a transmission parameter(range). Col. 2 lines 35-46).

Regarding Claim 12, the communication control method according to claim 9, comprising the step of controlling a transmission power ratio of a pilot channel to the data channel in accordance with a control channel error detection result notified from said receiver, and the modulation mode and encoding rate, Col. 8 lines (62-67) - Col. 9 lines (1-7).

Regarding Claim 13, Itoh discloses a transmission control method in a transmitter for adaptively controlling a modulation mode and an encoding rate for data transmitted to a receiver comprising the steps of:

controlling the modulation mode and encoding rate (Col. 1 lines 5-17), in accordance with a channel quality notified from said receiver, (Col. 1 lines (65-67)-Col. 2 lines (1-3)).

controlling a transmission power ratio of a control channel to a data channel in accordance with a control channel error detection result notified from said receiver and the modulation mode and encoding rate, Col. 3 lines (66-67)-Col. 4 lines (1-8). Referring to Fig.6, item 40 is responsible for error detection in the control channel and notifies all possible errors in a "retransmission request" to item 44 which in response transmits the error to the base station (Fig. 8, item 10) which is responsible for adjusting the power based on control channel error detection notified from the receiver

Art Unit: 4172

(Fig. 6). Referring to Fig. 8, item 113 controls transmission power of a modulation and encoding rate (item 13) containing channel quality information (SNR) received from item 112, Col.16 lines (25-28). Referring to Fig. 8, transmission power is controlled in a ratio of the control channel (Col. 22 lines 35-48), to data channel based on item 112 (control unit), Col. 20 lines 13-31.

Regarding Claim 14, The communication control method according to claim 13, comprising the step of controlling a transmission power ratio of a pilot channel to the data channel in accordance with the control channel error detection result notified from said receiver and the modulation mode and encoding rate, Col. 8 lines (62-67) - Col. 9 lines (1-7).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADNAN BAIG whose telephone number is (571) 270-7511. The examiner can normally be reached on Mon-Fri 7:30m-5:00pm eastern Every other Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis West can be reached on 571-272-7859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4172

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ADNAN BAIG/
Examiner, Art Unit 4172

/Lewis G. West/
Supervisory Patent Examiner, Art Unit 4172

Application/Control Number: 10/597,924
Art Unit: 4172

Page 13